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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/658,207 | 09/10/2003 | Hiromichi Hara | 00862.023231 | 3252 |
| 5514 | 7590 | 08/13/2004 | EXAMINER | |
| FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112 | | | NGUYEN, HUNG | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2851 | |

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,207

Applicant(s)

HARA, HIROMICHI 

Examiner

Hung Henry V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 2, the recitation of “wherein said partition wall is arranged on a structure which is different from said structure and supported by a vibration isolating mechanism” is ambiguous and indefinite. It is not clearly understood what “structure” the applicant refers to?

As to claim 8, the wherein clause of “wherein said partition wall is coupled by an elastic seal member to another partition wall which forms a closed spaced different from the close space” is vague and indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

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do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-6, 8-10, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwasaki et al (U.S.Pat. 6,621,556).

With respect to claim 1, Iwasaki et al discloses an exposure apparatus for transferring a predetermined pattern formed on a reticle onto a substrate and comprising all basic features of the instant claim such as: a structure (see figure 1) which is supported by a vibration isolating mechanism (15) and a partition wall which is inserted in at least part of an optical path (AX) of exposure light (IL) used in the exposure apparatus wherein the structure and the partition wall (23) are coupled by an elastic seal member (29C) to form a closed space and an interior of the partition wall is partitioned from a remaining space.

As to claim 2, Iwasaki et al disclose the partition wall is arranged on air pads (21, 22) which is different from the structure (16) and supported by a vibration isolating mechanism.

Regarding claim 3, Iwasaki teaches at least one of a wafer stage (25) and a reticle stage (10) is arranged in the closed space with the partition wall.

With respect to claims 4-5, Iwasaki further teaches gas supply means for supplying clean dry air/or inert gas into an internal space of the partition wall (see col.11, lines 15-31).

As to claim 6, Iwasaki suggests that the elastic seal member (29) is used at a connection portion between the partition wall and the gas supply means (see col.11, lines 12, lines 5-17).

As to claims 8-10, Iwasaki discloses the partition wall (23) is coupled by an elastic seal member (22A) which forms a close space different from the closed space and the different closed space is arranged on a structure which is supported by an independently arranged vibration isolating mechanism (21A).

As to claims 12 and 13, Iwasaki et al discloses the elastic seal member (29) being formed from a flexible material/or a metal thin film which allows folding a thin plate member into an accordion zigzag shape (see figure 1 and col.11, lines 35-51).

With respect to claim 14, the claimed method is seen to be inherent teaching in existence of the above apparatus.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al (U.S. Pat. 6,621,556) in view of Sogard (US 2002/0163631 A1).

With respect to claim 11, Iwasaki et al discloses an exposure apparatus comprising substantially all of the elements as recited in the instant claim as discussed including a stage device (10, 25) for moving while holding a mask (R) or a substrate(W). Iwasaki lacks to show a reaction force receiving structure arranged outside the partition wall. Sogard teaches a reaction force receiving structure (43) arranged outside of the partition wall independently of the structure

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supported by a vibration isolating mechanism for receiving a reaction force upon driving a stage device, a stage actuator (98) for generating a force between the stage device and the reaction force structure and an elastic seal member is employed between the force actuator and the partition wall (see section [0063]). In view of such teachings it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Iwasaki et al and Sogard to obtain the invention as specified in claim 11. It would have been obvious to a skilled artisan to utilize the reaction force receiving structure, as well as the force actuator and the elastic seal member with particular connection between these elements as taught by Sogard into the exposure apparatus of Iwasaki for the purpose of transferring the reaction force caused by the movement of the stage to the isolation base and thus improving the quality of the images to be printed.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al (U.S.Pat. 6,621,556) in view of Nakahara (US 2004/0017556 A1).

Regarding claim 7, Iwasaki discloses an exposure apparatus comprising substantially all of the limitations of the claim as discussed. Iwasaki does not expressly disclose the partition wall having a openable/closable door/or lid. However, this structure is well known per se. For example, Nakahara discloses an exposure apparatus comprising a chamber/partition wall for housing the mask/or substrate wherein the chamber/partition wall has openable/closable door. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an openable/closable door as suggested by Nakahara on the partition wall of the Iwasaki for at least the purpose of maintenance in the partition wall.

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Prior Art Made of Record

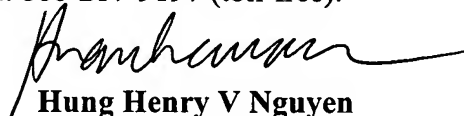
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nogawa et al (U.S 2002/0018190 A1) discloses an exposure apparatus comprising substantially all elements as recited in the instant claims of the present application.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Hung Henry V Nguyen
Primary Examiner
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hvn
8/10/04